



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/716,787

11/20/2000

Joseph Quinn Chapman

061606-1241

9842

24504

7590

04/28/2006

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA 30339-5948

EXAMINER

TORRES, JOSEPH D

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/716,787

Applicant(s)

CHAPMAN, JOSEPH QUINN

Examiner

Joseph D. Torres

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 71,72,74,80-83 and 103-107 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 71,72,74,80-83 and 103-107 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 71, 72, 74, 80-83 and 103-107 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 71 recites the limitation "the operating parameter" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 103 recites the limitation "the operating parameter" in line 10. There is insufficient antecedent basis for this limitation in the claim.

For now the Examiner assumes that the Applicant intended, "an operating parameter".

Response to Arguments

2. Applicant's arguments with respect to claims 71, 72, 74, 80-83 and 103-107 have been considered but are moot in view of the new ground(s) of rejection.

However; in the interest of speeding up prosecution of the case, the Examiner addresses the applicant's arguments, below:

The Examiner begins with an updated rejection of claim 71 for the Applicant's benefit:

35 U.S.C. 103(a) rejection of claim 71.

Art Unit: 2133

Pregont teaches a receiver for developing a received signal (Transceiver 101 in Figure 1 of Pregont is communication device comprising a Receiver 111); and a digital signal processor. (Transceiver 101 in Figure 1 of Pregont is communication device comprising a DSP 115; Note col. 2, lines 30-32 of Pregont teach that the processing system is substantially a DSP since it is comprised of a DSP), where said DSP comprises: layer one logic configured to perform OSI layer one processing (col. 3, lines 11-13 in Pregont teaches that RCH frames are comprised of layer one control bits; col. 4, lines 23-42 in Pregont teach that DSP 115 is digital logic for encoding and processing RCH frame data; hence DSP 115 is comprised of layer one logic configured to perform OSI layer one processing); and frame check sequence logic configured to compute a frame check sequence (FCS) on each frame of said received signal, wherein the layer one logic has access to said frame check sequence (CRC 321 is substantially a frame check sequence for checking the integrity of the RCH frames). A count is a parameter and a counter is a means for calculating and storing a current count. Step 515 Figure 5 in Pregont teaches a counter for calculating and storing a count parameter. Note: If the received signal is error free the counter does not change the currently saved count stored in the counter so that the same count parameter as before (differing only by the fact that the count is for a currently received data unit) is still stored in the counter. However Pregont does not explicitly teach the specific use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter.

Art Unit: 2133

Chow, in an analogous art, teaches use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter (col. 13, lines 22-36 in Chow teaches FEC 68 in the Echo Canceller 58 of Figure 7 is used to compute new coefficients; Note: **coefficients are stored operating tap parameters** used in an equalizer filter).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pregont with the teachings of Chow by including use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter would have provided an adaptive means for adjusting tap coefficients (col. 13, lines 22-36 in Chow).

The Applicant contends, "A person of ordinary skill in the art would understand that the value of the counter remains unchanged when no error is found. However, person of ordinary skill in the art would not understand Pregont et al. to teach that the unchanged

Art Unit: 2133

value is written to the counter again, because such an access would take unnecessary CPU cycles and memory access”.

The Examiner does not see how the Applicant's argument has anything to do with the limitations in claim 1. Claim recites the limitation, “means for saving the operating parameter, if said frame check sequence indicates that said received signal is error free”. The Examiner asserts that, if there is no error then the counter is not changed and the current count operating parameter remains is the same as the previous count operating parameter and remains saved in the counter until the next data unit is analyzed; that is; Pregont teaches a counter for saving the previous count operating parameter as the current count operating parameter, if said frame check sequence indicates that said received signal is error free.

The Applicant contends, “However, Applicant will assume, arguendo, that FIG. 5 of Pregont et al. teaches saving the counter if the received signal is error free. Even so, the counter disclosed in Figure 5 of Pregont et al. is not an operating parameter of an equalizer, echo-canceller, adapted gain device, or timing loop as recited in amended claim 71”.

Nowhere in claim 1 is there any limitation requiring the operating parameter of line 10 to be “an operating parameter of an equalizer, echo-canceller, adapted gain device, or timing loop” since that is not explicitly stated in the limitation in lines 10-11 of claim 1.

Note: since the operating parameter" in line 10 lacks antecedent basis, the Examiner is

Art Unit: 2133

assuming "an operating parameter". Note also, the term "at least one operating parameter" does not provide antecedent basis for the limitation in lines 10-11 of claim 1.

The Applicant contends, "Applicant can find no discussion in the cited references of receive margin level, or adapting receive margin level".

The Examiner asserts that col. 13, lines 22-36 in Chow teaches FEC 68 in the Echo Canceller 58 of Figure 7 is used to compute new coefficients. One of ordinary skill in the art at the time the invention was made would have known that tap coefficients control the receive level margin for the receiver and updating the coefficients is a step for adjusting them (col. 7, lines 25-28 in Chow teach that the coefficients are adjusted to remove the effects of echo by adjusting the receive level of the echo canceller).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 2133

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 71, 72, 74, 80-83 and 103-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pregont; Gary J. et al. (US 5351245 A, hereafter referred to as Pregont) in view of Chow; Jacky S. et al. (US 5623513 A, hereafter referred to as Chow).

35 U.S.C. 103(a) rejection of claim 71.

Pregont teaches a receiver for developing a received signal (Transceiver 101 in Figure 1 of Pregont is communication device comprising a Receiver 111); and a digital signal processor (Transceiver 101 in Figure 1 of Pregont is communication device comprising a DSP 115; Note col. 2, lines 30-32 of Pregont teach that the processing system is substantially a DSP since it is comprised of a DSP), where said DSP comprises: layer one logic configured to perform OSI layer one processing (col. 3, lines 11-13 in Pregont teaches that RCH frames are comprised of layer one control bits; col. 4, lines 23-42 in Pregont teach that DSP 115 is digital logic for encoding and processing RCH frame data; hence DSP 115 is comprised of layer one logic configured to perform OSI layer one processing); and frame check sequence logic configured to compute a frame check sequence (FCS) on each frame of said received signal, wherein the layer one logic has access to said frame check sequence (CRC 321 is substantially a frame check sequence for checking the integrity of the RCH frames). A count is a parameter and a counter is a means for calculating and storing a current count. Step 515 Figure 5 in Pregont teaches a counter for calculating and storing a count parameter. Note: If the

Art Unit: 2133

received signal is error free the counter does not change the currently saved count stored in the counter so that the same count parameter as before (differing only by the fact that the count is for a currently received data unit) is still stored in the counter.

However Pregont does not explicitly teach the specific use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter.

Chow, in an analogous art, teaches use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter (col. 13, lines 22-36 in Chow teaches FEC 68 in the Echo Canceller 58 of Figure 7 is used to compute new coefficients; Note: **coefficients are stored operating tap parameters** used in an equalizer filter).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pregont with the teachings of Chow by including use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating

Art Unit: 2133

parameter would have provided an adaptive means for adjusting tap coefficients (col. 13, lines 22-36 in Chow).

35 U.S.C. 103(a) rejection of claim 72.

A count is a parameter and a counter is a means for calculating and storing a current count. Step 515 Figure 5 in Pregont teaches a counter for calculating and storing a count parameter. The counter uses the existing count parameter if an error is found and increments the existing count parameter by 1.

35 U.S.C. 103(a) rejection of claim 74.

Col. 13, lines 22-36 in Chow teaches FEC 68 in the Echo Canceller 58 of Figure 7 is used to compute new coefficients. One of ordinary skill in the art at the time the invention was made would have known that tap coefficients control the receive level margin for the receiver and updating the coefficients is a step for adjusting them (col. 7, lines 25-28 in Chow teach that the coefficients are adjusted to remove the effects of echo by adjusting the receive level of the echo canceller).

35 U.S.C. 103(a) rejection of claims 80-83.

Claims 80-83 are intended use claims and do not result in any structural change to claim 70. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is

Art Unit: 2133

capable of performing the intended use, then it meets the claim.

In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

35 U.S.C. 103(a) rejection of claims 103-106.

Pregont teaches a receiver for developing a received signal (Transceiver 101 in Figure 1 of Pregont is communication device comprising a Receiver 111); and a digital signal processor (Transceiver 101 in Figure 1 of Pregont is communication device comprising a DSP 115; Note col. 2, lines 30-32 of Pregont teach that the processing system is substantially a DSP since it is comprised of a DSP), where said DSP comprises: layer one logic configured to perform OSI layer one processing (col. 3, lines 11-13 in Pregont teaches that RCH frames are comprised of layer one control bits; col. 4, lines 23-42 in Pregont teach that DSP 115 is digital logic for encoding and processing RCH frame data; hence DSP 115 is comprised of layer one logic configured to perform OSI layer one processing); and frame check sequence logic configured to compute a frame check sequence (FCS) on each frame of said received signal, wherein the layer one logic has access to said frame check sequence (CRC 321 is substantially a frame check sequence for checking the integrity of the RCH frames). A count is a parameter and a counter is a means for calculating and storing a current count. Step 515 Figure 5 in Pregont teaches a counter for calculating and storing a count parameter. Note: If the

Art Unit: 2133

received signal is error free the counter does not change the currently saved count stored in the counter so that the same count parameter as before (differing only by the fact that the count is for a currently received data unit) is still stored in the counter.

A count is a parameter and a counter is a means for calculating and storing a current count. Step 515 Figure 5 in Pregont teaches a counter for calculating and storing a count parameter. The counter uses the existing count parameter if an error is found and increments the existing count parameter by 1. Note: a counter is means for calculating a value for the parameter; means for storing the calculated last-known count value as a last known good value if a message received from a remote device indicates the calculated value is acceptable; means for updating the parameter with the last-known good count value if the frame check sequence indicates that said received signal is error free; and means for updating the parameter with the most recently calculated value if the frame check sequence indicates that the received signal contains errors. However Pregont does not explicitly teach the specific use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter.

Chow, in an analogous art, teaches use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter (col. 13, lines 22-36 in Chow teaches FEC 68 in the Echo Canceller 58 of Figure 7 is used to

Art Unit: 2133

compute new coefficients; Note: **coefficients are stored operating tap parameters** used in an equalizer filter).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pregont with the teachings of Chow by including use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of said receiver comprises an adaptive device chosen from the group consisting of an equalizer, echo-canceller, adapted gain device, and timing loop, the adaptive device having at least one operating parameter would have provided an adaptive means for adjusting tap coefficients (col. 13, lines 22-36 in Chow).

35 U.S.C. 103(a) rejection of claim 107.

A count is a parameter and a counter is a means for calculating and storing a current count. Step 515 Figure 5 in Pregont teaches a counter for calculating and storing a count parameter. If the received signal is error free the same count parameter as before is stored in the counter.

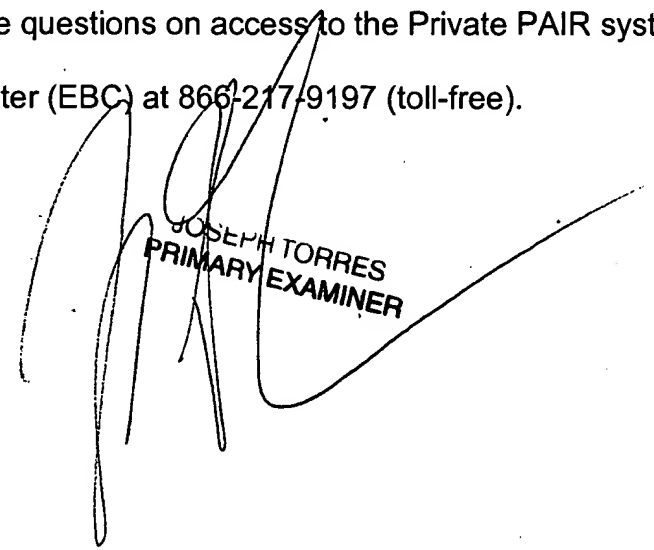
Art Unit: 2133

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JOSEPH TORRES
PRIMARY EXAMINER

Joseph D. Torres, PhD
Primary Examiner
Art Unit 2133